

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for the removal of silver from a cuprous chloride solution in a copper recovery process, comprising removing, in at least two stages, silver from the cuprous chloride solution with soluble mercury, wherein fine-grained copper powder is fed countercurrently to the cuprous chloride solution, the method comprising:

feeding mercury into the cuprous chloride solution at preselected stages in a preselected molar ratio to the silver in the solution;

precipitating silver amalgam onto the surface of fine-grained copper powder;

removing the precipitated silver amalgam from the cuprous chloride solution for the separation of mercury and silver;

recycling soluble mercury back to silver removal; and

treating the removed precipitated silver amalgam for the recovery of silver;

wherein the treating step comprises leaching the precipitated silver amalgam into a dilute chloride solution using an oxidant, whereby the mercury dissolves as mercury chloride and the silver precipitates as silver chloride.

2. (currently amended) The method according to claim 1, wherein the molar ratio of mercury to silver in a first amalgam precipitation silver removal stage is 0.5–2.

3. (currently amended) The method according to claim 1, wherein the molar ratio of mercury to silver in a second amalgam precipitation silver removal stage is at least 2.

4. (currently amended) The method according to claim 3, wherein the molar ratio of mercury to silver in the second ~~amalgam precipitation~~ silver removal stage is between 2 – 10.

5. (previously presented) The method according to claim 1, wherein the fine-grained copper powder has a particle size of less than 200 μm .

6. (currently amended) The method according to claim 5, wherein the amount of fine-grained copper powder being countercurrently fed is in the range of about 100 g/L based on the cuprous solution.

7. (previously presented) The method according to claim 1, further comprising feeding the fine-grained copper powder countercurrently to a mercury removal stage after the at least two silver removal stages.

8. (cancelled)

9. (currently amended) The method according to claim 1 [[8]], wherein the oxidant is sodium hypochlorite.

10. (currently amended) The method according to claim 1 [[8]], wherein the oxidant is hydrogen peroxide.

11. (currently amended) The method according to claim 1 [[8]], wherein the oxidant is oxygen.

12. (currently amended) The method according to claim 1 [[8]], further comprising routing the dissolved mercury chloride back to the leaching step.

13. (currently amended) The method according to claim 1 [[8]], further comprising routing the silver chloride to a silver recovery step.

14. (currently amended) The method according to claim 1 [[8]], wherein the alkali chloride content of the dilute chloride solution in the leaching step is at least 200 g/L.

15. (previously presented) The method according to claim 1, wherein the cuprous chloride solution comprises 30 — 100 g/L of monovalent copper.

16. (previously presented) The method according to claim 1, wherein the cuprous chloride solution has pH value of 1 — 5 in the precipitating and removing steps.

17. (currently amended) The method according to claim 1, further comprising removing silver from the cuprous chloride solution using fine-grained copper powder in a stage prior to the at least two silver removal amalgam precipitation stages.

18. (previously presented) The method according to claim 17, wherein the fine-grained copper powder has a particle size of less than 200 μm .

19. (previously presented) The method according to claim 18, wherein the amount of fine-grained copper powder being countercurrently fed is in the range of 100 g/L.